

DuPont Personal Protection

CLANDESTINE CHEMICALS PERMEATION GUIDE

This guide has been developed to report the results of chemical permeation tests performed on Tychem® fabrics with select chemicals most commonly found in clandestine labs.

This information should be shared with law enforcement customers who routinely search for labs that manufacture illegal drugs.

TECHNICAL DATA SHEET

Materials	Chemical										
	Form	Class	Tychem® SL	Tychem® CPF 2	Tychem® F	Tychem® CPF 3	Tychem® BR and Tychem® LV	Tychem® CPF 4	Tychem® Responder	Tychem® TK	Tychem® Reflector
Reagents											
Acetic Acid	Liquid	100	>480	>480	>480	84	339	>480	>480	>480	>480
Aluminum	Solid	330	nt	nt	nt	nt	nt	nt	nt	nt	nt
Anhydrous Ammonia	Gas	350	32	32	79	12	46	>480	>480	>480	>480
Calcium Hydroxide	Solid	380	nt	nt	nt	nt	nt	nt	nt	nt	nt
Formic Acid	Liquid	100	>480	>480	260	>480	>480	>480	>480	>480	>480
Hydriodic Acid, 55%	Liquid	370	nt	nt	>480	>480	>480	>480	nt	>480	>480
Hydrochloric Acid, 37% (Muriatic Acid)	Liquid	370	>480	>480	>480	>480	>480	>480	>480	>480	>480
Hydrogen (gas)	Gas	330	nt	nt	nt	nt	nt	nt	nt	nt	nt
Hydrogen Chloride (gas)	Gas	350	>480	>480	>480	nt	>480	>480	>480	>480	>480
Hypophosphorous Acid, 50%	Liquid	370	nt	nt	>480	>480	nt	nt	nt	nt	nt
Iodine	Solid	330	>480	>480	nt	nt	nt	>480	>480	nt	nt
Lithium	Solid	330	nt	nt	nt	nt	nt	nt	nt	nt	nt
Lithium Aluminum Hydride	Solid	340	nt	nt	nt	nt	nt	nt	nt	nt	nt
Mercuric Chloride, sat. sol. in water	Liquid	340	>480	>480	>480	nt	>480	>480	>480	>480	>480
Palladium Black	Solid	330	nt	nt	nt	nt	nt	nt	nt	nt	nt
Palladium/Barium Sulfate	Solid	340	nt	nt	nt	nt	nt	nt	nt	nt	nt
Perchloric Acid, 70%	Liquid	370	nt	nt	nt	nt	>480	nt	>480	>480	>480
Phosphine	Gas	350	nt	nt	imm.	nt	>480	nt	>480	>480	>480
Phosphorus (red)	Solid	330	nt	nt	nt	nt	nt	nt	nt	nt	nt
Phosphorus Pentachloride	Liquid	360	nt	nt	nt	nt	nt	nt	nt	nt	nt
Platinum (catalyst)	Solid	330	nt	nt	nt	nt	nt	nt	nt	nt	nt
Platinum Chloride	Solid	340	nt	nt	nt	nt	nt	nt	nt	nt	nt
Sodium	Solid	330	nt	nt	nt	nt	nt	nt	nt	nt	nt
Sodium Hydroxide, 50%	Liquid	380	>480	>480	>480	>480	>480	>480	nt	>480	>480
Sulfuric Acid, 98%	Liquid	370	>480	>480	>480	>480	>480	>480	>480	>480	>480
Thionyl Chloride	Liquid	360	nt	nt	10	15	35	nt	45	90	35

Index of Codes:

> = greater than

< = less than

L = liquid

G = gas

Imm. = immediate (<10 minutes)

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Product safety information is available upon request. This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentations. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. It is the user's responsibility to determine the level of risk and the proper protective equipment needed for the user's particular purposes. This information may be subject to revision as new knowledge and experience becomes available. Since we cannot anticipate all variations in actual end-use conditions, DUPONT MAKES NO WARRANTIES AND ASSUMES NO LIABILITY IN CONNECTION WITH ANY USE OF THIS INFORMATION. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

Normalized Breakthrough Times (NBT) shown in minutes. Numbers reported are averages of samples tested by the ASTM F739 test method. Sample results do vary and therefore averages for these results are reported.

Industrial chemicals are tested at room temperature with standardized breakthrough times based on reaching a permeation rate of 0.1 pg/cm²/min. as defined in ASTM F739.

All permeation tests are conducted by independent, accredited testing laboratories. All results are based on ASTM F739 Test Method for Resistance of Protective Clothing Materials to Permeation by Liquids or Gases under Continuous Contact. Copies of individual reports are available by calling 1-877-797-5907. Refer to the DuPont Permeation Guide or the DuPont™ SafeSPECT™ CD ROM for standard chemical permeation testing methodology.

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